

U.S. ENVIRONMENTAL PROTECTION AGENCY  
 POLLUTION/SITUATION REPORT  
 BP-Husky Refinery Fire - Removal Polrep  
 Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 Region V

**Subject:** POLREP #2  
 Final  
 BP-Husky Refinery Fire  
 C5WX  
 Oregon, OH  
 Latitude: 41.6708268 Longitude: -83.4528063

**To:** Motria Caudill, ATSDR  
 Todd Goeks, NOAA  
 Jodi Billman-Kotsko, Ohio EPA  
 Mike Eberle, Ohio EPA  
 Dave Schilt, Ohio EPA  
 Wayne Babcock, U.S. Department of Interior  
 Robert Burr, U.S. Department of Interior  
 Valincia Darby, U.S. DOI  
 John Nelson, U.S. DOI  
 Jim Augustyn, U.S. EPA  
 Carolyn Bohlen, U.S. EPA  
 Sam Borries, U.S. EPA  
 Phillippa Cannon, U.S. EPA  
 Jason El-Zein, U.S. EPA  
 HQ EOC, U.S. EPA  
 John Glover, U.S. EPA  
 Mick Hans, U.S. EPA  
 Luke Jones, U.S. EPA  
 Annette Trowbridge, U.S. Fish & Wildlife  
 Matt Mankowski, U.S. EPA  
 Mark Mullins, Oregon Fire and Rescue Department  
 General Email, Ohio Department of Health  
 Amber Bellamy, U.S. FWS

**From:** Elizabeth Nightingale, OSC

**Date:** 10/14/2022

**Reporting Period:** 9/28/22 - 10/14/23

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	C5WX	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	PRP	<b>Incident Category:</b>	Removal Action
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	9/20/2022	<b>Start Date:</b>	9/20/2022
<b>Demob Date:</b>	10/14/2022	<b>Completion Date:</b>	10/14/2022
<b>CERCLIS ID:</b>	OHN000521858	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	OEPA
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

Emergency Response (CERCLA)

#### 1.1.2 Site Description

A fire and presumed explosion occurred at the BP-Husky Toledo Refinery at approximately 1845 EDT (local) on September 20, 2022. EPA received two NRC reports from the facility that day - An earlier NRC report from the refinery, received at 3:42 PM reported that hydrogen sulfide and sulfur dioxide was releasing to the air due to a failure of a piece of refinery process equipment (exchanger) at 8:00 AM that morning, and the facility was working to repair the leak [NRC #: 1347790]. At 10:05 PM EDT the facility submitted an NRC report update stating that a fire had occurred at the facility but had been extinguished, that there were 2 injuries associated with this incident, that the refinery had been shut down, and SO<sub>2</sub> and H<sub>2</sub>S continue to be released [NRC #: 1347829]. The City of Oregon (OH) Fire Department responded alongside plant personnel. EPA received a request for air monitoring support from the Oregon Fire Department.

EPA mobilized to the site on September 20, 2022 to conduct assessment, air monitoring and work with the facility to ensure that runoff associated with the incident was not discharged to nearby surface waters.

Upon EPA arrival on site at around 11:30 PM EDT, EPA confirmed that the fire had been extinguished, and the plume appeared to have dissipated. The Oregon Fire Department had demobed. EPA met with facility personnel who provided the following information:

Facility personnel stated that they were still investigating the cause of the fire but believed that a release of liquid and vapor from the fuel gas mix drum ignited causing the fire, at approximately 6:30 PM.

Facility personnel indicated that Refinery operations had been shut down pending detailed facility inspection and development of a facility re-start plan. Flaring was continuing, and fire watch was ongoing. Facility staff indicated that they believed that the fire was isolated to the south area - large crude unit.

Facility staff stated that all fire-fighting and site stormwater runoff is captured in the facility drainage system that flows to the on site waste water treatment plant (WWTP) (entire facility drains to this treatment plant), but were unable to initially produce a legible copy of a drainage map for the facility so that EPA could verify this. Staff stated that the WWTP uses a 5 step treatment process - a) separation; b) air flotation; c) activated bio. sludge; d) clarifier; and e) sand filter then discharges through a cooling channel into Lake Erie. Facility staff later provided a legible copy of the facility drainage map which showed drainage to the WWTP.

Facility staff stated that they had conducted some on-site air monitoring for H2S (ppm), CO (ppm), O2 (%), LEL (%) and VOC (ppm) at ground level using the Refinery’s standard 5-gas monitor at 8:55 PM and at 10:30 PM. Staff reported that no elevated levels were detected except for a maximum of 20 ppm CO near the Alky2 unit and a maximum of 1.4 ppm VOCs near the Alky 1 unit during the 8:55 PM monitoring round. No offsite or fenceline monitoring was conducted.

Facility staff stated that they were unsure if PFAS containing foam had been used in fire fighting operations. Facility staff later clarified that during the event, BP-Husky operations used approximately 35 gallons of firefighting foam that contains anywhere between 1-5% PFAS by weight per the SDS.

1.1.2.1 Location

The BP-Husky Refinery is located at 4100 Cedar Point Road, Oregon, OH 43616. The facility is just south of the confluence of Maumee Bay (a bay within Lake Erie) and the Maumee River. Otter Creek also runs just west of the facility boundary.

The site is adjacent to an active railroad line to the west. To the east is residential housing and agricultural fields. Commercial/industrial properties are located to the south of the site.

1.1.2.2 Description of Threat

Media reports during the incident indicated that the incident produced a significant smoke plume in the vicinity of the Refinery, and facility staff indicated that flaring would need to continue for an unknown amount of time. Facility staff were also unable to initially produce a legible copy of a drainage map for the facility so that EPA could verify that all runoff from the incident and fire fighting would be captured and treated by the onsite waste water treatment plant (WWTP). Therefore, potential threats to air quality and surface water were present.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA requested, obtained and shared with OEPA and local fire, an IMAAC model of the potential air release and smoke trajectory. The IMAAC model indicated potential for hazardous levels of soot within a range of approximately 500 feet to the north of the incident area, and a potential vertical soot profile of up to 1 kilometer in height that extended at that approximate elevation out about 27 kilometers, predicted to extend away from land and over Lake Erie based on near future weather predictions at the time. EPA discussed the model results with Refinery staff upon arrival on site.

EPA requested, obtained and shared with OEPA and local fire, a spot report from the National Weather Service which indicated that the intense wind and rainstorms ongoing during EPA's mobilization to the site would likely clear up after 1 AM for the evening .

EPA also completed a downstream vulnerability analysis for a 5 mile area downstream of the facility to consider potential impacts to vulnerable populations. No municipal water intakes were identified in this area. Numerous parks and marinas were identified, as well as potential for presence of several endangered bats and birds, and several potentially vulnerable populations including schools, hospitals and nursing homes that may have need further evaluation had the plume not dissipated and weather not carried it out towards Lake Erie.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On September 20, 2022, EPA received notification of the fire and explosion at the BP-Husky Refinery and received a request for air monitoring support from the Oregon Fire Department. EPA and START mobilized to the site to conduct assessment, air monitoring and work with the facility to ensure that runoff associated with the incident was not discharged to nearby surface waters.

2.1.2 Response Actions to Date

Continued BP-Husky Outfall Monitoring

Over this reporting period, the facility continued providing daily summaries - including datasheets and photos- of outfall monitoring observations made once a day to EPA, OEPA and the City of Oregon between September 27, 2022 - October 3, 2022. No unusual characteristics of the discharge were observed over this monitoring period. On October 3, 2022, EPA advised BP-Husky that they could discontinue providing updates to EPA on the outfall conditions. EPA requested that the facility notify EPA when they have a restart plan established and a planned re-start date.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The incident occurred on the BP-Husky Refinery property. EPA issued a Notice of Federal Interest to BP-Husky. The Refinery is reportedly in the process of being sold to Cenovos.

2.1.4 Progress and Regional Metrics

Regional Metrics		
This is an Integrated River Assessment. The numbers should overlap.	Miles of river systems cleaned and/or restored	n/a
	Cubic yards of contaminated	n/a

Stand Alone Assessment	sediments removed and/or capped		
	Gallons of oil/water recovered	n/a	
	Acres of soil/sediment cleaned up in floodplains and riverbanks	n/a	
	Number of contaminated residential yards cleaned up	n/a	
	Number of workers on site	50 (est)	
Contaminant(s) of Concern	hydrogen sulfide, sulfur dioxide and crude oil		
Oil Response Tracking			
Estimated volume	Initial amount released	n/a	
	Final amount collected	n/a	
CANAPS Info	FPN Ceiling Amount	n/a	
	FPN Number	n/a	
	Body of Water affected	n/a	
Administrative and Logistical Factors (Place X where applicable)			
Precedent-Setting HQ Consultations (e.g., fracking, asbestos)	x	Community challenges or high involvement	Radiological
More than one PRP		Endangered Species Act / Essential Fish Habitat issues	Explosives
AOC		Historic preservation issues	Residential impacts
UAO		NPL site	Relocation
DOJ involved		Remote location	Drinking water impacted
Criminal Charges Have Been Filed*		Extreme weather or abnormal field season	Environmental justice
Tribal consultation or coordination or other issues		Congressional involvement	x High media interest
Statutory Exemption for \$2 Million		Statutory Exemption for 1 Year	x Active fire present
Hazmat Entry Conducted – Level A, B or C		Incident or Unified Command established	x Actual air release (not threatened)
Green Metrics			
Metric		Amount	Units
Diesel Fuel Used		n/a Emergency Response	gallons
Unleaded Fuel Used		n/a Emergency Response	gallons
Alternative/E-85 Fuel Used		n/a Emergency Response	gallons
Electricity from electric company		n/a Emergency Response	kWh
Electric Company Name and Account #		n/a Emergency Response	
Electricity from sources other than the electric company		n/a Emergency Response	kWh
Solid waste reused		n/a Emergency Response	
Solid waste recycled		n/a Emergency Response	
Water Used		n/a Emergency Response	gallons

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

### 2.2.1.1 Planned Response Activities

### 2.2.1.2 Next Steps

As of September 26, 2022, BP-Husky staff reported that U.S. Occupational Safety and Health Administration (OSHA) and U.S. Chemical Safety Board (CSB) investigations were ongoing the site, and there were not yet plans yet to re-start the refinery.

Also as of September 26, BP-Husky staff reported that they did not see oil on the ground from the incident and that they believed that the oil that was discharged burned up.

BP-Husky will notify EPA when Refinery re-start plans have been developed. The City of Oregon and Ohio EPA plan to oversee the Refinery re-start process, and contact EPA if any further assistance is needed.

As of October 14, 2022 EPA has not yet been notified that the Refinery has initiated re-start.

### 2.2.2 Issues

## 2.3 Logistics Section

N/A

## 2.4 Finance Section

### 2.4.1 Narrative

An estimate of response costs is not yet available.

### Estimated Costs \*

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
TAT/START	\$20,000.00	\$0.00	\$20,000.00	100.00%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$20,000.00	\$0.00	\$20,000.00	100.00%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

N/A

### 2.5.2 Liaison Officer

N/A

### 2.5.3 Information Officer

N/A

## 3. Participating Entities

### 3.1 Unified Command

Unified Command was not formally established for this response.

### 3.2 Cooperating Agencies

City of Oregon

Ohio Environmental Protection Agency (OEPA)

## 4. Personnel On Site

9/20/22- 9/21/22

USEPA - 1

START - 4

OEPA- 1

## 5. Definition of Terms

ATSDR     Agency for Toxic Substances and Disease Registry

BZ         Breathing Zone

CERCLA   Comprehensive Environmental Response, Compensation, and Liability Act

CERCLIS   Comprehensive Environmental Response, Compensation, and Liability Information System

DCE        Dichloroethylene

DNR        Department of Natural Resources

EPA         Environmental Protection Agency

ERNS       Emergency Response Notification System

NCP        National Oil and Hazardous Substance Pollution Contingency Plan

NOAA	National Oceanic and Atmospheric Administration
NPL	National Priorities List
NRC	National Response Center
ODH	Ohio Department of Health
Ohio EPA	Ohio Environmental Protection Agency
OSC	On Scene Coordinator
PPB	Parts per billion
PPM	Parts per million
RCRIS	Resource Conservation and Recovery Act Information System
RP	Responsible Party
RRT	Regional Response Team
START	Superfund Technical Assessment and Response Team
TCE	Trichloroethylene
US FWS	United States Fish and Wildlife Service
USCG	United States Coast Guard
VC	Vinyl Chloride
VOC	Volatile Organic Compound

## **6. Additional sources of information**

### **6.1 Internet location of additional information/report**

[response.epa.gov/BPHusky](https://response.epa.gov/BPHusky)

### **6.2 Reporting Schedule**

TBD

## **7. Situational Reference Materials**

Some additional reference documents are included in the documents section of this website: [response.epa.gov/BPHusky](https://response.epa.gov/BPHusky)